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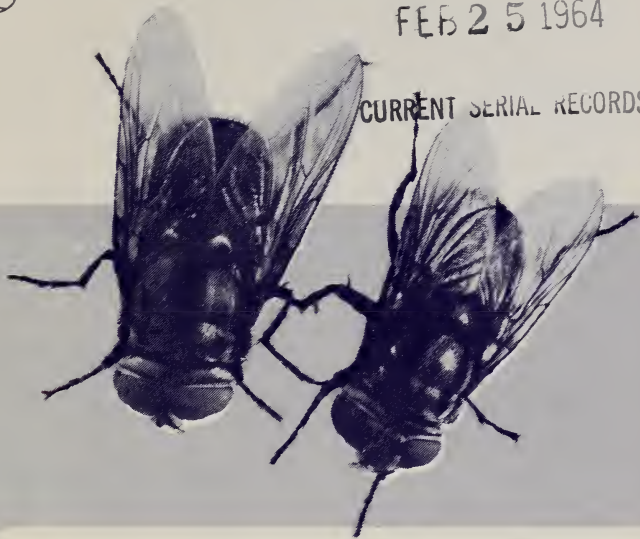


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CURRENT SERIAL RECORDS



# **FACTS ABOUT THE SCREWWORM**

CA-11-1                      April 1960  
Agricultural Research Service  
U. S. Department of Agriculture

# FACTS ABOUT THE SCREWWORM

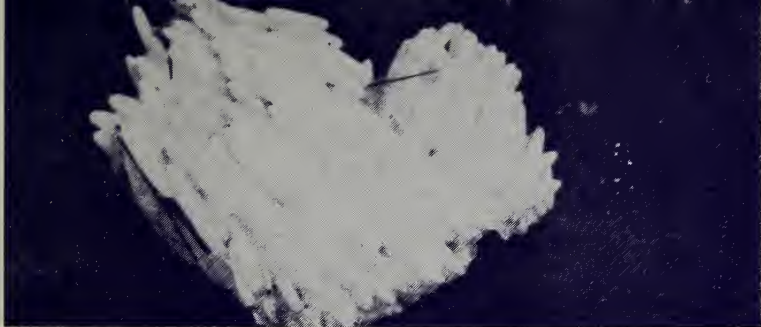
## STATUS OF SCREWWORM ERADICATION

Screwworm parasites continue to be a major problem to livestock growers in the southwestern United States, where estimated annual losses amount to millions of dollars. Screwworms migrate northward during warm weather from overwintering areas in subtropical regions of the Southwest. During summer months screwworm flies may move as far north as Colorado and Nebraska, where they cause loss and injuries to livestock. Infested animals, shipped north, may carry screwworms into South Dakota and Iowa.

Historically, screwworms also have been a major pest in the southeastern United States. However, no screwworm infestations arising from the southeastern overwintering areas have been found in the Southeast since June 1959 because of co-operative Federal-State efforts to eradicate the pest. A number of screwworm cases arising from the Southwest infestation were reported in western Mississippi in August 1959.

Untreated screwworm infestation can kill in 10 days





The fly lays about 250 eggs in a cluster on the wound

The southeastern eradication program has involved use of a new weapon--the release of millions of man-raised screw-worm flies, made sexually sterile by exposure to radioactive materials. When the sterile male flies mate with native female flies, the eggs laid are infertile and do not develop. As sterile flies are continually released in large numbers, fertile matings are less probable. Native flies decline in numbers and eventually are eradicated.

Success with the sterile-fly technique in the Southeast has created interest in applying this approach against screwworms in the Southwest.

## **SURVEY of Southwestern U. S. and Mexico**

A screwworm survey was conducted in 1959 in the southwestern United States and in northeastern Mexico to learn more about the habits of the insect and to determine if the sterile-fly technique could be applied in these areas.

No natural barrier, like the water barrier that partly surrounds the screwworm overwintering area in Florida, was found in Mexico which would prevent northward migration of flies and subsequent reinfestation of uninfested areas. An eradication program, therefore, would not be feasible without a continuing program to prevent reinfestation.

In view of the extensive area involved, the difference between this area and the southeastern United States, and the lack of research information, the next joint program by the United States and Mexico should be directed to research and field trial on sterile male and other techniques that might be used to eradicate or control the screw-worm menace.





Thousands of maggots may work in a single wound

Screwworm infestations can be controlled and losses prevented by following good livestock practices and by using facilities adequate for handling. Quick and effective treatment of infested animals, along with observance of restrictions on animal movements, benefits stockmen of the Southwest and, at the same time, protects the screwworm eradication area in the Southeast.

## THE SCREWWORM

The screwworm, the maggot of a fly, is a true parasite that feeds only on the live flesh of warm-blooded animals.

Although screwworm cases cannot always be verified without correct identification of maggots taken from the wound, most livestock producers are familiar with the symptoms and usually can recognize an infestation.

The female fly lays about 250 eggs to the cluster on a wound. The egg cluster is about the size of the end of a cigarette. When females are numerous, they lay egg clusters overlapping each other. Freshly laid egg clusters are white, but they change to a dull gray after about 12 hours. The tiny, newly hatched maggots burrow into the flesh of the animal and begin feeding. Wounds infested with screwworms have a distinctive, foul odor. A characteristic bloody or brownish discharge drains from the wound and stains the hair below. Feeding maggots usually are covered by this fluid. The maggots feed in closely packed groups, continually rasping away at living flesh.

Screwworms feeding in a wound gouge out a deep pocket--often the maggots feed so deeply that they cannot easily be recognized, but close observation will reveal the rear ends of the maggots projecting just

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### Treat wounds promptly

above the surface of the bloody discharge. An infested wound attracts other screw-worm flies; consequently, thousands of maggots may be at work within a few days in a single wound.

Screwworm maggots normally mature in 5 or 6 days, then fall to the ground to pupate and develop into flies.

An infestation can kill an untreated, full-grown animal in 10 days or less, depending on the location of the wound.

## PREVENTION AND TREATMENT

Screwworms cause suffering and death to cattle, sheep, hogs, and deer and other wildlife. Good management of your livestock will keep infestations at a minimum.

Prompt treatment of infested wounds will kill the maggots before they develop into flies.

Here is a list of practices found useful in reducing losses from screwworms.

- Carefully examine your livestock for wounds at least twice a week. Any open wound is susceptible to attack. An injury may be as small as a tiny cut, scratch, or tick bite. Find every animal; examine it carefully; treat every wound or infestation promptly. Infested animals often stray away from the herd--to avoid further attack, they seek shelter in dense brush.

- Use EQ-335 or Smear 62 on infestations and as a wound dressing. Follow instructions on the label. Repeat treatments at least twice a week until the wounds are healed. Keep infested animals where they are easy to inspect and treat.

- Organic Phosphorous Insecticides approved for use on livestock are commercially available and when applied with power spray equipment in accordance with





### Sprays may be used for control

manufacturer's recommendation on the label are effective in killing screwworms in wounds and providing protection against reinfestation for a number of days.

- Carefully examine animals being loaded or unloaded at your ranch and treat all wounds. You and your neighbors will have fewer screwworms if you make sure that the animals you buy are free from screwworms when they are loaded at point of origin.

- Manage your livestock so as to avoid injuries. Schedule breeding so that birth of animals will take place during cool weather when screwworms are least active. Treat the navels of newborn animals and repeat treatment as needed until healed. Nip off the needle teeth of baby pigs.

Use bloodless emasculators to castrate cattle, sheep, and goats. Treat other surgical operations with screwworm remedies. Closely watch all wounds until healed.

Treat wounds made by branding, ear-marking, ear-tagging, and dehorning. During screwworm season, tip the sharp horns of cattle.

Keep fences, pens, and chutes in good repair to prevent injuries from protruding snags, nails, wire, and splinters.

Control ticks and insects by spraying the animals with recommended insecticides.

Do not use catch dogs on livestock.

Encourage your neighbors to use these precautions. You will have fewer screwworms on your ranch if you and your neighbors cooperate.

Prepared from information supplied by Animal Disease Eradication Division, Agricultural Research Service, U. S. Department of Agriculture, Washington 25, D. C.

